

International Training Workshop on Integrated Coastal Management

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1. INTRODUCTION

The international training workshop on “Integrated Coastal Management” was held at the Park Plaza Hotel in Boston, Massachusetts, USA, from July 20-21 1997. The workshop was the fourth in a series of training workshops (Long Beach '91, New Orleans '93, Tampa '95) and was organized and co-sponsored by the National Ocean Service of the U.S. National Oceanic and Atmospheric Administration, the U.S. Agency for International Development, the Intergovernmental Oceanographic Commission of UNESCO, the University of Rhode Island Coastal Resources Center, the University of Delaware Center for the Study of Marine Policy, the University of Massachusetts Urban Harbors Institute, the Massachusetts Coastal Zone Management Program, the Massachusetts Port Authority and Normandeau Associates.

The objectives of the workshop were:

- 1) to review progress in implementation of Chapter 17 from the 1992 United Nations Conference on Environment and Development (UNCED)’s Agenda 21;
- 2) to provide an opportunity for participants to consider and compare their own experience associated with Integrated Coastal Management (ICM) at both the national and local levels with other practitioners and program managers, both national and international;
- 3) to introduce approaches to ICM that address a range of issues; and
- 4) to provide the opportunity to view a local level example of efforts to promote integrated coastal management.

These ICM workshops have been held in conjunction with the Coastal Zone international conference series which have been hosted in the United States since 1978. The Coastal Zone conferences bring together coastal and ocean managers from around the world, providing a forum to examine the complex, multi-disciplinary problems facing the world’s coastal zones.

The workshop structure included two morning panels that outlined current international initiatives, and national or regional responses to these initiatives. During the afternoon session participants worked in groups discussing a case study and sharing experiences gained within their own practices. The workshop concluded with a field trip to Pleasant Bay, Cape Cod, which provided participants with a local example of integrated management, national/local partnerships and conflict resolution.

2. PANEL A: UPDATES AND PROGRESS OF INTERNATIONAL ICM INITIATIVES:

Ms. Katie Ries of the U.S. National Oceanic and Atmospheric Administration, briefly outlined some of the international ICM initiatives that have been implemented since the 1992 United Nations Conference on Environment and Development (UNCED). She then introduced the speakers of Panel A who elaborated on these activities and their relationship to the issues of climate change, biodiversity, land-based sources of marine pollution, and others. Panelists represented the perspectives of international experts, governmental and non-governmental organizations and donor institutions.

Global Trends: Population and Coastal Demographics

Don Hinrichsen, a consultant to the United Nations, gave an overview on global population trends and coastal demographics. The bulk of humanity now dwells along the coasts and economic activity is also concentrated there. By 1996, global populations reached 5.8 billion and are growing at approximately 80 million/year. Close



to 60% of this population, or 3.8 billion people, live and work along a coast line or within 160 km (100 miles) of one. By 1999, the world will support over 6 billion people and projections indicate that by 2025, population will reach 8 billion. Of this 8 billion, it is estimated that 6 billion, or 75%, will reside in coastal areas.

These trends have been building since the Middle Ages, and have sharply risen since the second World War primarily because of the general increase in wealth and technological advances. With these intense population pressures have come widespread resource degradation. Particularly hard hit are man-

groves, seagrass beds and coral reefs. Globally, 70% of corals have been destroyed or are in jeopardy, half of all mangrove cover has been lost and sea grass beds are deteriorating. If coastal and near-shore ecosystems and the wealth of biological diversity they harbor are to be saved, concerted efforts are needed to conserve and manage these imperiled resources. Managers must take a more comprehensive view of these impacts and examine what's causing them rather than solely focusing on their effects. In order for coastal management plans to be effective, they require the following fundamental ingredients:

- They must be participatory, not imposed. Local community involvement in all phase of coastal management is essential.
- It makes sense to find a lead agency of the central government to oversee coastal management with solid local counterpart agencies.
- Coastal urban planning is very important to resource management, but is often neglected. Coastal cities and towns need to be brought into the process.
- Resource management is perhaps the most difficult, given the multiple uses of coastal areas. Zoning coastal areas must be done in cooperation with major resource users.
- The process of coastal governance should build public constituencies in support of broad-based management plans.

Ocean and Coastal Progress Since UNCED

Dr. Biliana Cicin-Sain, of the University of Delaware, Center for the Study of Marine Policy, gave an update of progress that has come out of the 1992 United Nations Conference on Environment and Development (UNCED) which produced Agenda 21. The UNCED was a watershed event in the history of international relations. When the conference concluded, there was a call to achieve sustainable development for all the world's people. Dr. Cicin-Sain went on to examine what has been achieved for oceans and coasts, and particularly with ICM.

A special session of the U.N. General Assembly was held in June 1997 (known as Rio plus five years) to assess U.N. accomplishments since UNCED. The mood was a 'very depressing' one because environmental indicators demonstrate a continuing deterioration of global ecosystems over the last five years. However, on the positive side, there has been a large change in institutions which should make a difference in the future.

There has been more progress achieved in ocean and coastal issues than in other areas of Agenda 21. ICM has been adopted world-wide as a means of managing the intricate problems associated with the coasts and is reflected in a number of international agreements and conventions developed or entered into force since UNCED. These include: the U.N. Law of the Sea, Framework Convention on Climate Change, Straddling Fish Stocks Agreement, Small Island Developing States Action Plan, Global Program of Action (GPA) for the Protection of the Marine Environment from Land-Based Activities, and the International Coral Reef Initiative. Interna-

tional financial institutions have embraced ICM and have expanded their funding of coastal and marine-related projects, through such mechanisms as the Global Environment Facility.

International institutions have prepared guidelines on ICM, U.N. and non-governmental entities have developed extensive ICM programs and there has been much capacity building on ICM, with the development of education programs around the world. National work on ICM is underway in many countries.

In summary, although adequate financial contributions haven't been fully realized on the international scale, there has been much institutional organization and focus around the implementation of ICM. While this has not translated into major changes within the state of the global environment, the foundation for this change has been laid.

ICM and Ocean Science and Monitoring

Salvatore Aricò, Intergovernmental Oceanographic Commission (IOC), presented 1998 - The International Year of the Ocean and the dedicated draft program developed by the IOC through inter-agency cooperation; and recent developments on integrated coastal management within the IOC and its role in ICM.

In recognition of the importance of the ocean, the marine environment and its resources crucial to life on earth and sustainable development, the United Nations has declared 1998 as the International Year of the Ocean. This provides a window of opportunity for governments, organizations and individuals to become aware of the ocean situation and to consider the actions needed to undertake our common responsibility to sustain the greatest common heritage we have and upon which we depend.

1998 - The International Year of the Ocean is attracting increasing attention. Its role as a catalyst for public awareness, environmental education and engaging governments' in the protection of the oceans and the adoption of sustainable development practices is, according to the United Nations Special Session on Earth Summit + 5, "a challenging opportunity that should not be missed by governments".

One basic reason for launching the International Year of the Ocean is that so far neither the governments nor the public pay adequate attention to the need to protect the marine environment and to ensure a healthy ocean. Global change- and biodiversity-related research has illustrated the crucial role of the ocean in our life supporting system, and as part of the earth climate and ecological system. The importance of the ocean was well recognized during UNCED 1992; and now, five years later, the decision to have the International Year of the Ocean clearly demonstrates a growing concern about the ocean among governments.

The major aim of this initiative will be to provide adequate resources and give the priority to the oceans and coastal areas which they deserve as finite-sized economical assets. This is most important, in view of the increasing threats of pollution, population pressure, excessive fisheries, coastal zone degradation and climate variability to ocean resources.

Initiatives dedicated to the International Year of the Ocean include: (i) an Ocean Charter; (ii) Ocean Education activities, including activities in the schools; (iii) an Ocean Assessment; (iv) Stamp Series; (v) Public Information and Promotion Materials, including a dedicated Internet Home Page (<http://www.unesco.org/ioc/yoto/yotohome.htm>); and (vi) Ocean Awards in 1998. International organizations involved in ocean-related issues have planned their contributions to the event. FAO, IAEA, IMO, UNEP and WMO are paying significant attention to the preparations for the International Year of the Ocean and several organizations have provided the IOC Secretariat with their plans. The inter-agency cooperation program contains joint meetings, conferences, regional assessments related to Global Plan of Action for Land-Based Activities and the state of the marine environment, a joint contribution to EXPO'98, and a UN Interactive Atlas of the Ocean.

Other initiatives include the building of a new generation of "operational oceanographers." There is a need to

find a new education paradigm which can meet the need for professionals who can address management questions, socio-economic aspects in addition to questions on how the ocean works and responds to various forces and uses.

On recent developments on ICM within IOC, Salvatore Aricò stated that the concept is now well integrated in the approach and resolution of coastal problems of IOC's Members States. The most recent developments in ICM within the IOC have seen the launching of a program specifically devoted to Marine Science and Observation Inputs to ICM.

The role of several UN agencies in ICM is illustrated by these organizations' different mandates. The involvement of so many agencies also reflects the complexity of the ICM issue. However, no single UN agency has an overall responsibility, hence the need for sharing of responsibilities and mutual co-ordination. In the case of IOC, research, data management and data and information exchange, other marine services, and training are the main areas in which the Commission provides assistance to efforts on ICM. Data management includes the improvement of data quality; information exchange implies the use of data networks and clearing houses for information-sharing on oceans and coastal zones.

The wide acceptance of the ICM concept is probably due to its comprehensive nature, which encompasses and addresses all kinds of issues concerning the coastal zone. The concept is flexible, adaptable to different socio-economic-cultural contexts, and it will soon be possible to evaluate it in an efficient way. Future orientations will have to include the commitment to the further promotion of the ICM concept and the training process that is needed to lay the necessary basis for such a concept to be adopted and applied. The IOC also recognizes the particular importance of the process of gathering the best scientific data and information, which represents an important condition for the concept to be used in the best possible way and for the development of responsible solutions that would benefit the whole society. IOC is ready to continue collaborating with governments, relevant international organizations, including non-governmental, and individual scientists in building the expert capacity and communication framework that are needed for successful ICM.

ICM and Climate Change

Ms. Martha Perdomo, of the U.N. Framework Convention on Climate Change (FCCC) Secretariat in Bonn, Germany spoke next about ICM activities related to the convention. In the 1980's, growing scientific evidence of global climate change and the subsequent increased public concern spawned the creation of the UNFCCC. A treaty was drafted and after only two years of international negotiations, the Convention was adopted on May 9, 1992. A month later, at the Rio "Earth Summit," the Convention was signed by 155 nations and entered into force in March 1994. As of July 1996, the UNFCCC had been ratified by 166 countries. These countries have recognized climate change as "a common concern of humankind."

The goal of the Convention is to forge a global strategy "to protect the climate system for present and future generations". Governments that become Parties to the Convention will seek to achieve its ultimate objective of stabilizing "greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic [human-made] interference with the climate system." The Convention provides a "framework" within which governments can work together to carry out new policies and programs that will have broad implications for the way people live and work.

The most relative Convention articles pertaining to ICM are Article 4.1 (b), which calls for nations to implement programs that mitigate climate change; and Article 4.1 (e) which specifically calls for nations to develop ICM plans.

The Annex-I Parties (developed countries and economies in transition countries) were committed to present their first National Communications to the Convention six months after ratification. Including reporting on

emissions, national policies, and other climate initiatives, nations were asked to report on their vulnerability and associated impacts of climate change. As of May 1, 1996, thirty-one Annex-I Parties (all except Belgium, the EC and Lithuania) had reported. Most of these national communications discussed the vulnerability of ecological and economic systems to climate change. Uncertainties with regard to the predictions of climate change were mentioned by some Parties as a major problem in identifying impacts and vulnerability.

Twenty-one of the thirty-one reporting Parties also included climate change adaptation measures in their national communications. However, several noted the constraints in planning for the uncertain effects of climate change. Several countries mentioned the effects of sea-level rise on coastal planning and management.

During the Second Conference of the Parties (July 1996) a decision was approved to require countries to specifically report on vulnerability assessment and adaptation. While only ten of these communications have been received, they have all included specific information on ICM.

ICM and Land-Based Sources of Pollution

Dr. Sian Pullen, of the WWF-UK (World Wildlife Fund) next discussed the Global Programme of Action for the Protection of the Marine Environment from Land-Based Activities (GPA-LBA). The GPA-LBA was adopted in Washington, DC on November 3, 1995 and while it has received the least attention of all the agreements since the Earth Summit, its importance is paramount.

The GPA-LBA recognizes that increases in populations and economic activities in coastal areas are leading to an expansion of construction as well as alteration and loss of coastal habitats and associated wildlife populations. In many areas there are repercussions from human populations as fish spawning and nursery areas have been lost to land claims or pollution of habitats. The GPA-LBA's objectives include the safeguarding of ecosystem function; maintenance of biological diversity; and where practical, the restoring of marine and coastal habitats affected by human activities. To accomplish its goals, the GPA-LBA has recognized that integrated coastal management is one of the major tools for coordinating programs aimed at preventing marine degradation.

The GPA-LBA functions on three levels: international, regional and national. Internationally, it works to strengthen existing cooperation and institutional mechanisms between nations, and establish new arrangements where appropriate. Activities cover capacity building, mobilization of financial resources, international institutional frameworks, and additional areas of international cooperation (waste water treatment, persistent organic pollutants). Regional activities strive to strengthen new regional cooperative agreements and joint actions. Developments on the regional scale include the following: the Arctic and Mediterranean regions have drawn-up a draft regional program of action; and the Middle-East and South-West Atlantic are to hold meetings in 1997. The GPA-LBA advocates national development of comprehensive, continuing and adaptive programs of action within ICM, re-emphasizing its importance as the framework for addressing this critical issue.



ICM Training

Ms. Alice Hicuburndi, of the United Nations next outlined the UN Train-Sea-Coast (TSC) Program. The UN launched the TSC Program in 1993 through the Division for Ocean Affairs and the Law of the Sea, Office of Legal Affairs, with the support of the Sustainable Energy and Environment Division of the United Nations Development Programme.

The TSC Program is an inter-country cooperative training network made up of academic and training institutions from developing and developed countries. It involves the management and sustainable development of oceans and coastal areas and is directly responsive to the call of the 1992 United Nations Conference on Environment and Development (UNCED) for enhanced human resources development through training and education.

The TSC Program works toward the establishment of an international, decentralized program for coordinated



development and sharing of high quality standardized course materials relating to ocean and coastal sustainable development. It facilitates, through its network of 10 centers around the world, the exchange of materials, information and instructors in order to allow their maximum utilization worldwide, thus avoiding duplication of effort and reducing the costs of developing training programs.

TSC is based on a previous global communications strategy known as the “Train-X Strategy.” The major elements of the Train-X Strategy include: 1) common course development methodology; 2) coordinated development of training material to maximize resources and avoid duplication; 3) a coopera-

tive network for exchange of materials and instructors; 4) a series of courses for the training of trainers including HRD/training managers, course developers and instructors; 5) use of modern training techniques, including open learning and computer assisted learning; and 6) use of training information systems for the management of large cooperative networks.

A major advantage of this system is that funds are concentrated on building national capacity, which is technically and financially sustainable, as opposed to using consultants. In addition to this, training packages are developed locally and are matched closely to a specific job in order to provide more effective training in the shortest time frame. While the focus of the program is local, there is a central support unit. Its functions include overall program management and coordination, quality control of the course, training of course developers and instructors, as well as managing and monitoring the network.

ICM and the World Bank

Ms. Marea Hatziolos next gave an overview of World Bank initiatives in ICM. The Bank is a relative newcomer to ICM and its history of ICM programs has endured an internal struggle which parallels those on a global scale. Those who are promoting the integrated coastal management concept within the Bank have used ICM to illustrate the important link between environmental and economic issues. In 1993, the Bank created the ‘Blue Team’-a group of specialists devoted to identifying linkages and best practices in the management of freshwater, coastal and marine resources. Bank support of ICM has grown into a formally recognized program, which

currently targets three main areas of intervention: awareness creation and training; investments; and partnerships. Currently, there is \$260 million for ICM projects in the Bank's portfolio.

The Bank has undertaken an evaluation of ICM activities in the Mediterranean region to better understand what was/was not successful, and identify lessons learned and disseminate the results. To accomplish this, the Bank is examining the effectiveness of the Mediterranean Environmental Technical Assistance Program (METAP). METAP was established in 1990 to bring together the countries of the Mediterranean to address common environmental problems. METAP helps countries prepare policies, program and investment projects to cope with marine pollution, inadequate water supply and sanitation, habitat destruction, etc.

Case studies of different countries in the Mediterranean were used to evaluate effectiveness at the program and project levels. On the project level, the evaluations found that over half the case studies fulfilled stated objectives, however, complex projects were only partially successful. The programs created greater public awareness and strengthened institutional capacity, but improvements in the environmental quality of the study areas and overall impact of the programs were less easily determined. The projects were also evaluated on their sectoral, governance, and nation-regional integration.

Less than half achieved better than moderate sectoral integration. The study also found that there was weak vertical integration and poor stakeholder participation in most instances. However, ICM was effectively integrated into national planning in France, Israel and Tunisia. When examining project sustainability, the evaluation found that sustainable financing was not built into projects and the implementation phase was stalled due to insufficient resources, despite growing political support at the local level.

On the program level, the studies found that ICM was not generally integrated into national development planning, and was hampered by the lack of national policy framework and legislation; scaling-up successful projects was difficult in most countries without national programs; and linkages with regional economic programs were not developed. Ultimately, it was determined that it was premature to determine the overall impact from these programs.

3. PANEL B: REGIONAL RESPONSES TO INTERNATIONAL INITIATIVES

This panel, chaired by Ms. Lynne Hale of the University of Rhode Island's Coastal Resources Center, presented papers on the impacts that the above international initiatives have had on a particular country or region. Presenters were also asked to identify ideas to increase the positive impact of international ICM-related initiatives within their country.

Asia: Mr. Sapta Putra Ginting, Indonesia

Introduction: Indonesia consists of 17,508 islands and is surrounded by 81,000 km of coastline. Its total marine environment encompasses an area of 5.8 million km². This large coastal area, however is under tremendous stress. Of the nation's growing population of 200 million people, 60% live in coastal areas. In addition, there has been a great deal of industrial development within the coastal zone. This has led to serious degradation of coastal resources.

Indonesia has increased its reliance on coastal resources over the years. Fishery landings have increased from 0.7 million tons, in 1968, to 2.6 million tons in 1991. At the same time seafood exports increased from 21,000 to 409,000 tons/year. Indonesia has also experienced a rapid growth in the maritime transportation industry and the number of passenger-carrying vessels as well as tourism that has been concentrated in coastal areas. Unfortunately, a central agency does not exist that manages the many coastal issues. Because of this, there is a conflict of planning among sector developments/agencies including national and local government, private sector, and

the local community. This lack of sectoral coordination, in addition to the lack of law enforcement and human resources, has led to the degradation of marine resources.

In order to cope with these problems, Indonesia has implemented some ICM strategies as a result of international initiatives with assistance from United Nations and donor organizations. Listed below is an outline of some of these implementation projects.

Institutional Strengthening

- Need to improve marine resource management in order to sustain productivity and contribute to full economic development
- To accomplish this, cross-sector overlaps in the use of ecosystems must be identified and resolved and national guidelines should be established for marine regions and management of their resources

MREP Project (Asian Development Bank)

- Objectives: improve coastal planning and management and develop and strengthen existing coastal information systems

Riau Coastal (United Nations Development Programme)

- Develop a wetland profile and strengthen regional planning and broader local government and policy to maintain coastal resources

Coastal Resource Management Project (U.S. Agency for International Development)

- Find a model for ICM which emphasizes community-based resource management.

Segara Anakan Conservation and Development (Asian Development Bank)

- Focused on: 1) canal development under Public Works; 2) institutional development; and 3) coordination and management

Africa: Mr. Jeremiah Daffa, Tanzania

Coastal African nations are heavily dependent upon the coasts. In fact, the very survival of most populations is dependent on them through their economic and social ties to marine and coastal resources. This reliance, however creates incredible pressures on coastal areas for subsistence fishing, mangrove harvesting, coastal mining, and sewage discharge to name a few.

African nations have been impacted by international ICM initiatives and many are attempting to adopt ICM into national management plans. This integrated approach is new as most nations have been managing their coastal zones through a multi-sectoral approach in which there has been no national and local coordination. This is further complicated because most African nations face political instability.

Overall the African continent has experienced some success with regards to ICM, however, it largely has not taken root. Mr. Daffa also stated that in the number of examples where Africa has initiated programs, the issue of sustainability is questionable. Also capacity is not well built into most nations to develop or sustain ICM programs. African nations have shown, particularly on the community level, that they are quite adept at implementing ICM. Individual communities have realized the importance of their resources and have committed themselves to protecting them. However, even this community-based conservation will require national support to sustain it over the long-term.

Europe: Mr. Constantine Galabov, Bulgaria

Within Europe there is a lot of ICM activity. There are several levels of groups that are practicing ICM: international organizations, individual countries, local organizations/governments, etc. The major international initiatives have spurred regional activities in certain European seas, i.e. Mediterranean, Baltic, Black. As a result of these regional activities, ICM has been implemented as a strategy to cope with coastal stresses. On the national scale, individual countries have implemented legislative or institutional frameworks that incorporate ICM.

To further the implementation of ICM on national and regional levels, four points should be considered:

- Introduce ICM concept into governments and state agencies
- Establish regional cooperation (basin-wide) with neighboring countries
- Ensure participation of international organizations
- Help from developed nations, serving as role models for ICM development in Europe

Latin America/Caribbean: Dr. Leonard Nurse, Barbados

Within Latin America and the Caribbean, international ICM initiatives have awakened interest and triggered action in countries previously without structured ICM programs (e.g. Eastern Caribbean States); and have helped to support, strengthen and sustain existing programs (e.g. Barbados; British Virgin Islands, Costa Rica; Ecuador). In general, while global initiatives have not always led to 'formal' ICM programs, important ICM-related activities have started in practically all countries of the region. Examples include:

- Identification/establishment of focal points for coordination of coastal management activities
- Inventorying and mapping of critical coastal and marine resources
- Genuine attempts to better manage/regulate activities such as: fishing, sand mining, marine parks and protected areas, coastal development, coral reef protection/monitoring.

Furthermore, international ICM initiatives have had a major influence on the management of marine and coastal pollution, including land-based sources. Most states in the region are signatories to MARPOL (International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978 relating thereto), and some have begun to implement national obligations under the protocol. Almost all the countries in the region have completed inventories of land-based sources of marine pollution by category as well as amount and type. All countries have agreed to adopt the Caribbean Land-Based-Sources of Marine Pollution protocol when it is finalized. The Framework Convention on Climate Change (FCCC) has implemented a major regional program "Caribbean Planning for Adaptation to Global Climate Change," which is funded by a GEF grant (US\$6.3 million). This project includes establishing a sea-level monitoring network, constructing a climate change database, creating an inventory of coastal resources and use, and policy formulation among others.

There is no doubt this region has greatly benefited from some of the global initiatives implementing ICM. A few of the most important examples are:

- Notion/concept of ICM is slowly becoming part of the national thinking. There is also some sense of "ownership" among many stakeholders.
- National ICM activities are now better designed, planned and executed.
- Coordination among national agencies is improving.
- More and better utilization of national and regional expertise.
- Increasing number of bi- and multi-lateral partnerships, which have been forged at the national level, as a direct consequence of global initiatives.
- Improved, more functional institutional arrangements for ICM.

Mr. Nurse then listed steps which could be taken to increase the positive impacts of ICM initiatives:

- Critically review successes and failures of global ICM initiatives, and apply the lessons learned. Such action could help nations to avoid pitfalls, maximize resources, refine faulty/inappropriate methodologies, etc.
- While a number of Caribbean and Latin American states have “bought into” many global initiatives, far too many countries remain inactive or completely uninvolved. To derive maximum benefits from global ICM programs, nations must actively participate in, influence and shape the process, so that it is responsive to specific regional and national needs.
- Build formal and informal institutional linkages with global programs, which can help to expedite requests, provide access to critical information, and serve as vital feedback channels.
- Demand from international initiatives lasting regional and national benefits; e.g. assistance with training and skills acquisition, and institutional strengthening. Avoid projects/activities whose “benefits” do not extend beyond the life of the project.

North America/Gulf of Maine: Ms. Peg Brady, United States



The Gulf of Maine is a shared resource between five jurisdictions in three U.S. states (Massachusetts, New Hampshire, and Maine) and two Canadian provinces (Nova Scotia and New Brunswick). Its coastline extends from Nantucket, Massachusetts to Cape Sable, Nova Scotia. The Gulf supports an abundance of species, including: 140 species of birds; 205 species of fish; 26 species of whales, dolphins and porpoises; and 1,600 types of bottom-dwelling organisms, such as clams and marine worms. Twenty-nine of the species are listed as threatened as or endangered, including the critically endangered northern right whale. The Gulf's economic value is unparalleled when compared to similar ecosystems such as the Bering and North Seas. In 1988, total commercial fish landings were worth approximately \$650 million and employed

over 20,000 fishers; and aquaculture harvests totaled \$57 million. Tourism and home development have also created a positive impact on the region's economy.

In 1989 U.S. and Canadian representatives signed an agreement on the conservation of the marine environment of the Gulf of Maine. The agreement created the Gulf of Maine Council on Marine Environment which is composed of the top environmental officials and business leaders from each of the five member jurisdictions. Since then, the Council has launched a number of initiatives, including: 1) a marine debris reduction campaign; 2) a gulf-wide marine monitoring program; 3) a system for information sharing among the five jurisdictions; and 4) numerous public education materials and workshops. Today, the Council fosters cross-border cooperation among government, academic and private groups. The goal of the Council is to develop and implement a sustainable management strategy for the Gulf.

Historically, the Gulf has been under tremendous environmental stress. Of particular concern today are the effects of over-fishing, which has caused a collapse in ground fish populations; and the lingering effects of ocean dumping. Up until 1991, 30 tons of sludge a day were dumped directly into Boston Harbor, and combined sewer overflows were pouring into the harbor at a rate of four to five billion gallons annually. In 1991 the dumping was stopped and sewer overflows were reduced by more than two thirds which has resulted in substantial improvement in water quality.

In 1996 the GOM Council refined and updated its action plan. The action plan defines the council priorities, objectives and timetable for cooperation among the five jurisdictions. Five priority areas identified are:

- protect and restore regionally significant coastal habitat
- restore shellfish habitat
- protect human health and ecosystem integrity from toxic contaminants
- reduce marine debris
- protect and restore fishery habitats and resources

The Council has identified and focused their energies on specific priority areas for joint/international cooperation. A few examples follow:

- The Council supports a long-term marine ecosystem monitoring initiative, GULFWATCH
- Publication of GOM Times, which provides useful information on environmental, economic and social issues in the Gulf
- Supporting the five priority areas within their own jurisdictional programs
- Exploring ways to regionally implement the Global Plan of Action for Protecting the Marine Environment from Land-Based Activities

The bullets listed below illustrate what needs to be done to increase the positive impacts of international ICM initiatives in the Gulf region:

- Enhance public awareness of the GOM as an entity deserving special recognition and protection.
- Build partnerships that can enhance the activities in priority areas.
- Improve Council infrastructure and capacity to translate research/monitoring information about GOM to public.
- Identify strategies for improved implementation of action plan objectives.
- Reinforce and strengthen current partnerships.

4. LINKING INTERNATIONAL, NATIONAL AND LOCAL LEVELS OF ICM: THE CASE OF SRI LANKA

The case study of Sri Lanka was presented by Indra Ranasinghe (Sri Lanka), Dr. Kem Lowry, Lynne Hale and Brian Needham (United States) to compare two local level initiatives within a national ICM framework: the Rekawa and Hikkaduwa Special Area Management (SAM) Plans. These plans illustrate some of the progress being made involving stakeholder/community groups in meaningful co-management. Issues being addressed at the two very different SAM sites include coral degradation, land-based sources of pollutants (wastewater, solid waste and pollutants), marine sanctuary management, tourism/user conflicts, coastal erosion, shrimp mariculture and fisheries.

The full text of the case study can be found in Appendix III.

5. REPORT OF REGIONAL GROUP DISCUSSIONS

Workshop participants were separated into regional groups to discuss the Sri Lankan case study, describe local initiatives in their own countries and how they are linked to national and international initiatives. Participants were specifically asked to address the following questions: 1) Identify the resource issues most suitable for community/co-management and list the major obstacles that impede community/co-management in your country; and 2) In the context of your own country, discuss and report out your response to the following questions:

What can communities, government and non-government organizations do to overcome the obstacles listed in Task 1? What are appropriate roles for national agencies to support community/co-management? What can international programs/initiatives do to support community/co-management?

Full text of the regional group reports can be found in Appendix IV.

6. FIELD TRIP TO PLEASANT BAY, CAPE COD

Participants traveled to Cape Cod for a field visit of Pleasant Bay and a luncheon panel discussion of the development of a management plan for the Bay. The field trip was designed to highlight examples of national/local level linkages, low cost infrastructure projects or improvements, and user conflict resolution.

Participants first toured the Bay, stopping at four different sites, viewing the Bay's various resources and discussing some of the many uses and conflicts within the Bay. The Bay itself is one of the largest estuaries in Massachusetts, formed by glacial actions, along with ensuing forces of wind, waves, and currents, that sculpted the ponds, islands, and topography that exist in the region today. This major estuarine system includes two major embayments, two rivers, ten salt and fresh water ponds, an extensive marsh system, fifty-five miles of shoreline and barrier beach, and eight small islands.

The Pleasant Bay resource management plan project stems from a history of cooperation among the four towns of Chatham, Harwich, Brewster and Orleans. In 1987 the Massachusetts Secretary of Environmental Affairs, following nomination by the four towns, designated the 9,050 acre estuary an Area of Critical Environmental Concern (ACEC). This is a formal designation to protect and preserve Pleasant Bay and carried with it guidelines for the development of a resource management plan. In 1995, the four towns entered into a Memorandum of Agreement (MOA) to develop a joint resource management plan to protect the extensive resources of Pleasant Bay, and to establish the organizational framework for preparing the plan.

Pleasant Bay is a special area with a wide variety of user conflict areas/issues including: aquaculture; recreational and commercial fishing; recreational boating; watershed land use and shoreline erosion. It has a very active local advisory group developing a management plan which has employed high levels of public participation in the process. Active within this process, pursuant to the MOA referenced above, is a steering committee, a technical advisory committee, several state agencies including Massachusetts Coastal Zone Management and the Department of Environmental Management, as well a proactive non-governmental organization, the Friends of Pleasant Bay.

Appendix I

FINAL PROGRAM FOR A (PRE-CZ '97 CONFERENCE) INTERNATIONAL TRAINING WORKSHOP ON INTEGRATED COASTAL MANAGEMENT Boston, Massachusetts, July 20-21, 1997

CZ97 International Workshop Agenda

SATURDAY, JULY 19, through MONDAY, JULY 21, 1997:

THEME: International Progress in Integrated Coastal Management (ICM):
linking the international, national and local levels.

WORKSHOP

PRODUCT: A report summarizing international progress in implementing international
ICM initiatives at the regional, national and local level.

Saturday July 19, 1997

- 4-6PM Informal opening, sponsor welcome, introductions, registration
Boston Park Plaza Hotel, Whittier room
- 4-4:30 Welcoming Remarks by Workshop Sponsors:
U.S. National Oceanic & Atmospheric Administration/National Ocean Service
Massachusetts Port Authority
Massachusetts Coastal Management Program
University of Rhode Island, Coastal Resources Center
Intergovernmental Oceanographic Commission of UNESCO
University Of Delaware, Center for the Study of Marine Policy
Normandeau Associates
Urban Harbors Institute, University Of Massachusetts Boston
- 4:30-5:00 General Introductions of Workshop Participants
- 5:00-5:15 Workshop Structure/Methods & Objectives: Mr. Brian Needham,
University of Rhode Island, Coastal Resources Center

Sunday 20 July

- 8:30 AM Welcome and introductions, overview of the program
- 9:00 AM Panel A: Updates and Progress of International Initiatives:
(10 minute overviews, followed by Q & A to panel)
- Moderator: Katie Ries, National Oceanic and Atmospheric Administration
* Don Hinrichsen, Population & Coastal Demographics
United Nations Consultant
- * Biliana Cicin-Sain Agenda 21: progress since Rio '92
University of Delaware, Center for the Study of Marine Policy
- * Salvatore Arico Chapter 17 Implementation: Global Ocean Observing System,
Biodiversity
UNESCO/Intergovernmental Oceanographic Commission

* Martha Perdomo Framework Convention on Climate Change
U.N. Framework Convention on Climate Change Secretariat

* Sian Pullen Land Based Sources/Global Plan of Action
WWF-UK, World Wildlife Fund

* Alice Hiciburundi United Nations Train Sea Coast Program
United Nations/Division for Ocean Affairs and Law of the Sea

* Marea Hatzios World Bank Initiatives
World Bank

10:30 AM break

Panel B: Regional Responses to International Initiatives:

Address questions: Whether and how have any of the above international initiatives had an impact on your country and region? What could be done to increase the positive impact of international ICM-related initiatives on what actually happens in a nation or region? Panelists give 5-10 minute response. Followed by Q&A to panel.

Moderator: Lynne Hale, University of Rhode Island, URI/CRC

- * Asia: Sapta Putra Ginting, Indonesia
- * Africa: Jeremiah Daffa, Tanzania,
- * Europe: Raphael Vartanov, Russia
- * Latin America/Caribbean Leonard Nurse, Barbados
- * North America: Peg Brady, Massachusetts CZM,
Gulf of Maine Council representative.

12:30-1:30 lunch

1:30-5 PM Linking International/National and Local Level ICM: The case of Sri Lanka

- * Indra Ranasinghe, Senior Planning Manager, Coast Conservation
Department, Sri Lanka;
- * Dr. G. Kem Lowry, Professor, Urban & Regional Planning, Univ of Hawaii;
- * Lynne Hale & Brian Needham, URI/CRC

Case study to present and compare two local level initiatives within a national ICM framework. This will be the Rekawa and Hikkaduwa Special Area Management (SAM) Plans from Sri Lanka, where progress is being made in involving national and local levels of government, along with significant stakeholder/community groups in meaningful co-management. Issues being addressed at the two very different SAM sites include coral degradation, LBS (wastewater, solid waste and pollutants), marine sanctuary management, tourism/user conflicts, coastal erosion, shrimp mariculture and fisheries.

2:30 PM Work in regional groups (5) with an assignment to discuss the Sri Lanka case, describe local initiatives in their own countries and how they are linked to national and international initiatives, and suggest how such linkages could be improved (participants will be given a list of prepared questions to consider beforehand). The output of the groups will be brief summaries of how linkages among international, national and local initiatives can be improved, providing examples where possible.

3:00 PM break

4:00 PM Regional groups present brief summaries of regional progress to
plenary

- 4:30 PM Plenary Panel/round table to discuss group outputs and address questions posed, which should conclude with a “What next?” question.
- 4:45-5 PM Briefing for Field trip: Truman Henson and Bob Duncanson
- 6-8 PM International Reception
Address: The Exchange Conference Center at the Boston Fish Pier,
212 Northern Avenue, Boston, Massachusetts

Monday July 21

- 7-9:00 AM depart hotel to Cape Cod
- 9-11:30 AM Field visit to Pleasant Bay, Cape Cod:

Pleasant Bay, Cape Cod is a special area with good examples of user conflict areas/issues including: aquaculture; recreation; traditional fishing; and shoreline erosion. It has a very active local advisory group implementing a management plan and high levels of public participation in the process. Active within this process is a steering committee, a technical committee for the Areas of Critical Environmental Concern (ACEC), as well an NGO, the Friends of Pleasant Bay.

The field trip will include: examples of National/local level linkages, ACEC's special area management (SAM), habitat examples, small/low cost infrastructure projects or improvements, and user conflict resolution. A luncheon panel with speakers will discuss the experience and linkages into international/national/regional.

- 11:45-12:30 Lunch at Wequassett Inn, presentation and Q & A
- 12:30-1:15 Presentations facilitated by Truman Henson:
- * Richard Miller - Chair, Pleasant Bay RMP Steering Committee
History of designation of Pleasant Bay as ACEC, RMP organizational structure
 - * Leslie Luchonok - Mass. Dept of Enviro. Management - ACEC program;
Interrelationship of local/state partners;
 - * Dr. Robert Duncanson - Chair, Pleasant Bay RMP Technical Advisory
Committee; Process, issue identification and mapping;
 - * Carole Ridley - Pleasant Bay RMP Planning Coordinator;
Public participation, surveys, and draft recommendations
- 1:15-2 PM Questions and Answers
- 2-2:30 Workshop wrap-up: discussion of field trip, review of overall progress related to the themes, evaluation of Workshop and recommendations.
- 2-2:30 depart Cape Cod; arrive back to Boston around 4-4:30.

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Appendix III - Case Study of Sri Lanka

Coastal Zone 97

Pre-conference Training Workshop on Integrated Coastal management

Sunday 21 July, 13.30 - 17.00

Theme: Linking International/National and Local Level ICM
The Case of Sri Lanka

Schedule and Background Notes

Resource persons:

Indra Ranasinghe, Senior Planning Officer, Coast Conservation Dept. Sri Lanka

Dr. G. Kem Lowry, Professor of Urban and Regional Planning, University of Hawaii

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The attached background notes are extracted from a document entitled:

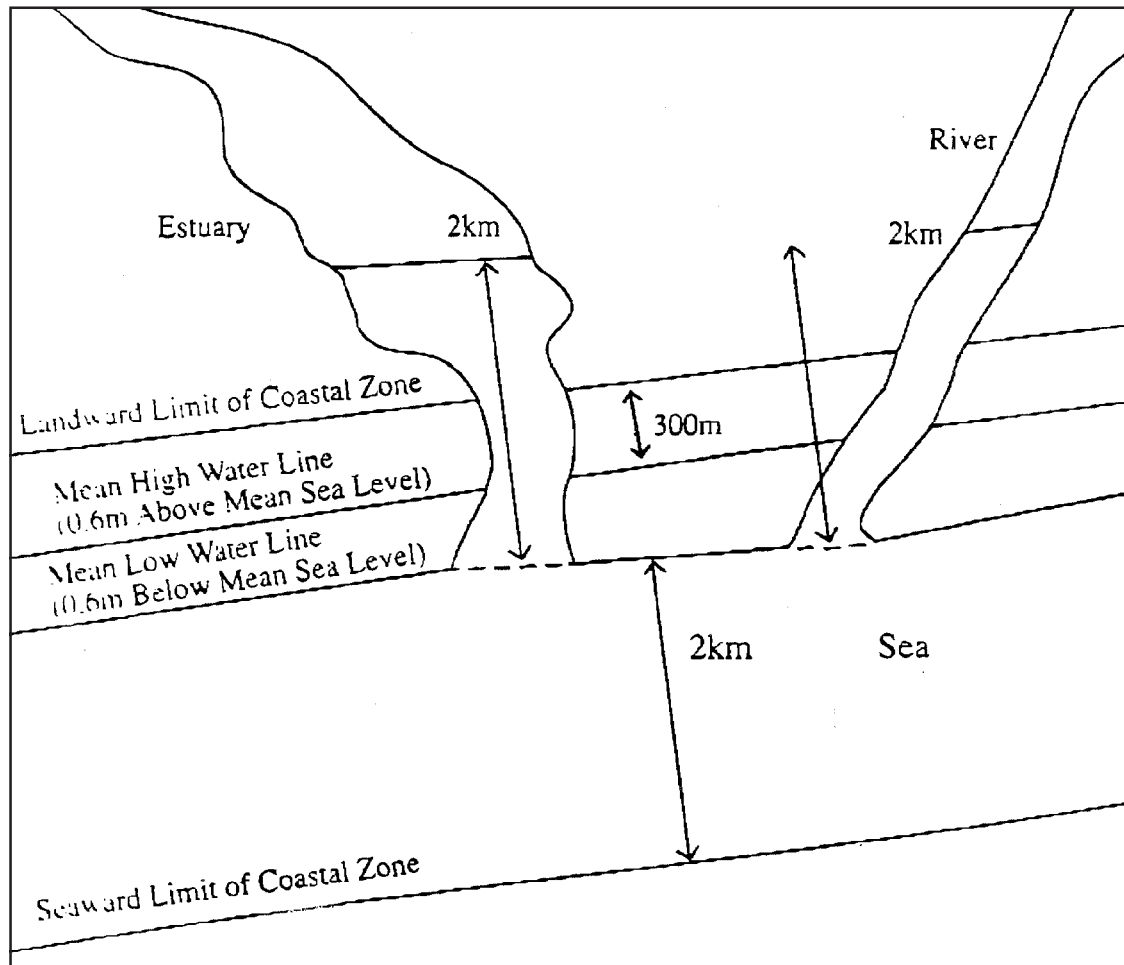
**A Preliminary Assessment of Special Area Management Projects at
Hikkaduwa and Rekawa, Sri Lanka**

Dr. Kem Lowry, Dr. Nirmalie Pallewatta and A.P. Dainis

Coastal resources Management Project Sri Lanka

February, 1997

Figure 1.a: The Sri Lanka Coastal Zone



I. INTRODUCTION

A. Context and Setting

The government of Sri Lanka enacted a coastal management law in 1981. The Coast Conservation Act (No. 57) defined the “coastal zone” as a 300 meter strip extending inland from the mean high water mark and imposed a permit requirement on all “development activities” within the designated coastal zone. The law also mandated the preparation of technical studies culminating in the development of a coastal management plan. The initial plan, prepared by the Coastal Conservation Department, was completed in 1989 and adopted by the Cabinet of Ministers in 1990.

The initial Coastal Zone Management Plan outlined strategies for providing greater management emphasis to historic, archeological and scenic sites and habitats in the coastal zone. However, the primary management emphasis was coastal erosion. Coastal erosion, particularly the southwest coast of the country, is a threat to public safety and private property and undermines roads, fishing harbors, railroads and other infrastructure. Millions of rupees are spent annually to repair the damage caused by coastal erosion and to reinforce eroding coastlines.

Coastal erosion is caused by the action of wind and waves, but its effects are exacerbated by the construction of groynes, revetments, harbors and other structures along the shoreline that interfere with long-shore transport of sand, by sitting roads and buildings too near the shoreline, by mining river and beach sand at unsustainable rates and other causes. As outlined in the first Coastal Zone Management Plan, the primary strategies for managing coastal erosion relied heavily on regulation, education and the development of coast protection works. The regulatory strategy relied on the designation of coastal setback areas in which building construction was virtually prohibited, the regulation by permit of the uses and sitting of other buildings and facilities within the 300 meter coastal zone, the designation of erosion-prone areas in which no erosion control structures would be allowed and the prohibition of coral mining. More than 2,700 coastal permit applications, primarily for house construction and sand mining, were processed in the first ten years of Coastal management.

Managing the coast has also relied on education. Educational activities, including workshops, films, poster contests for schoolchildren and other activities, emphasize the negative effects of coral mining (both in terms of loss of habitat and potential loss of coastal protection from wave action that reefs provide) and ecological value of coastal habitats. The combined effects of regulation and education resulted in a 50% reduction in offshore coral mining in the first decade of coastal management.

Finally, the first decade of management has also emphasized the construction of coastal protection works in some areas where coastal erosion is occurring. More than 3,000 meters of coastal protection works, primarily revetments, have been constructed.

In the early 1990s, the Coast Conservation Department and the University of Rhode Island/US Agency for International Development Coastal Resources Management Program in Sri Lanka conducted a review of Sri Lanka's coastal management implementation activities. The review was published in a report: Coastal 2000: A resource Management for Sri Lanka's Coastal Region. While identifying some of the strengths of the program, Coastal 2000 identified several problems in the initial implementation activities:

- Single agency and sectoral approaches to solving coastal resources management problems must be replaced by a more comprehensive perspective and approach.
- The implementation of the Coast Conservation Act (CCA) by the Coast Department (CCD) has demonstrated that the emphasis on regulation needs be revised.
- Important resource management concerns such as water quality, habitat degradation, natural resource use by people and institutional weaknesses are interrelated and require strategies involving more than one agency and a variety of management techniques.
- The narrow geographic definition of "the coastal zone" does not adequately recognize the interconnections within coastal ecosystems and resources.
- Participation by local and provincial officials and coastal communities in the formulation of plans and strategies must be strengthened, (Coastal 2000, pp. 15-17).

Coastal 2000 recommended a second generation coastal resources management strategy implemented at the provincial, district and local as well as national level, more monitoring and research and an enlarged public awareness and education program. It also recommended the design and implementation of Special Area Management Plans "to be implemented at specific geographic sites of ecological and economic significance."

Special Area Management Plans (SAMPs) are conceived as a "bottoms up" strategy for managing coastal resources that complements the existing "top down" regulatory approach in Sri Lanka. They allow for

intensive, comprehensive management of coastal resources in a well-defined geographic setting (as contrasted with a “use-by-use” regulation-by-permit approach). Participation by community residents or stakeholders in planning and management is central to the SAM concept: “A basic premise of the SAM process is that it is possible to organize local communities to manage their natural resources and that they will continue to do so if they perceive that they derive tangible benefits from better management” (White and Samarakoon, 20). Most advocates of SAM planning see government agencies playing a variety of roles in SAM planning and management. Government agencies serve as “catalysts” or “facilitators” which help organize communities to engage in resource management and provide technical support, as “mediators” to help balance competing demands in resource management or as “partners” of communities engaging in “co-management” with community groups.

In 1991, the Coast Conservation Department designated two SAM sites to begin planning: Hikkaduwa and Rekawa. Hikkaduwa is a tourist destination settlement about 100 km, south of Colombo. Small and medium-sized hotels, restaurants, bars and shops line both sides of the 4 km, coastal highway bordering the Hikkaduwa Marine Sanctuary. Urban run-off, untreated sewage discharge, sedimentation of the reef, wastes from boats and near-shore conflicts among boats, swimmers and other activities threaten the popularity of the town as a tourist destination site. Rekawa, on the other hand, is a lagoon environment in which coral mining, competition among fisher folk, living around the lagoon.

Beginning in 1992, CCD staff and representatives from the Coastal Resources Management Program began the process of SAM planning at both sites. Government officials in selected agencies at the national level were contacted and their interest and support was solicited. At the same time, CCD and CRMP staff began to liaise with community groups to identify groups with whom it might be possible to work in identifying community perceptions of resource management problems and priorities. Over the next three years, government officials, Community groups and interests group representatives identified priority resource management issues and technical questions. Special Area Coordinating Committees, composed of both community representatives and government officials, were established at both sites. Technical studies were commissioned and “environmental profiles” were developed for each site. Resource management issues and strategies and identified for both sites and compiled into special area management plans. These plans were both adopted by their respective Coordinating Committees in 1996.

THE TWO SPECIAL AREA MANAGEMENT SITES

A. HIKKADUWA

Hikkaduwa is a small-scale beach resort town located about 100 Kilometers south of Colombo in Galle District. Sandy beaches, coral reefs, inexpensive hotels and restaurants and Sri Lanka’s first Marine sanctuary are among Hikkaduwa in 1992 and contributed more than Rs 109 million in direct benefits and approximately Rs 900 million in direct benefits to the economy (SAM Plan for Hikkaduwa Marine Sanctuary and Environs, 1)

The rapid growth of tourism has contributed to a number of problems in Hikkaduwa, including: degradation of the coral reef ecosystem, deteriorating coastal water quality, increasing traffic congestion and noise, and conflicts between tourist and fishing interests.

The Hikkaduwa Special Area Management and Marine Sanctuary Coordination Committee was initiated in 1992 under the chairmanship of the Minister of Tourism and Rural Industrial Development. The Director

of the Department of Wildlife Conservation served as co-chair since 1992 the chairmanship of the committee has changed several times. It is now chaired by the Divisional Secretary. Membership of the committee has changed several times. Membership of the committee includes representatives of the National Aquatic Agency (NARA), the Ceylon Tourist Board (CTB), the Urban Development Authority (UDA), the Divisional Secretariat and the Pradeshiya Sabha (PS) Hikkaduwa, the Association of Tourist Board Approved Hoteliers of Hikkaduwa, the Hikkaduwa Glass Bottom Boat Owners Association, the Hikkaduwa Fisheries Cooperative Society (FCS), and the Hikkaduwa Small Hoteliers and Restaurateurs Association (SAM Plan for Hikkaduwa Marine Sanctuary and Environs, 3). Staff from the Coast Conservation Department and the Coastal Resource Management Project helped mobilize the planning effort and have helped facilitate implementation activities.

The project site is shown in Figure 1. The SAM project area includes the marine sanctuary (45 ha) on the ocean side and 13 Grama Niladhari (GN) Divisions (1020 ha) extending from Totagamuwa in the north to Patuwatha in the south. The 1990 population was approximately 13,815 or about 3,424 people per sq. km. Urban uses consume about 40% of the total SAM area and coconut plantation accounts for another 35% of the land area (SAM Plan for Hikkaduwa Marine Sanctuary and Environs, 5).

Discussions among members of the coordinating committee led to the identification of a number of key issues in the Hikkaduwa area:

Table 1: Management Issues in the Hikkaduwa SAM Site

Hikkaduwa Marine Sanctuary Resources

- Degradation of coral reefs and marine life
- Inadequate anchorage and landing for fishing boats and poor access route into the harbor
- Poorly controlled and conflicting uses of the marine sanctuary

Water Quality and Waste Disposal

- Deteriorating coastal water quality
- Improper disposal of sewage and gray water into ground water and coastal waters
- Inadequate solid waste disposal
- Insufficient fresh water supply

Shoreline and Community Character

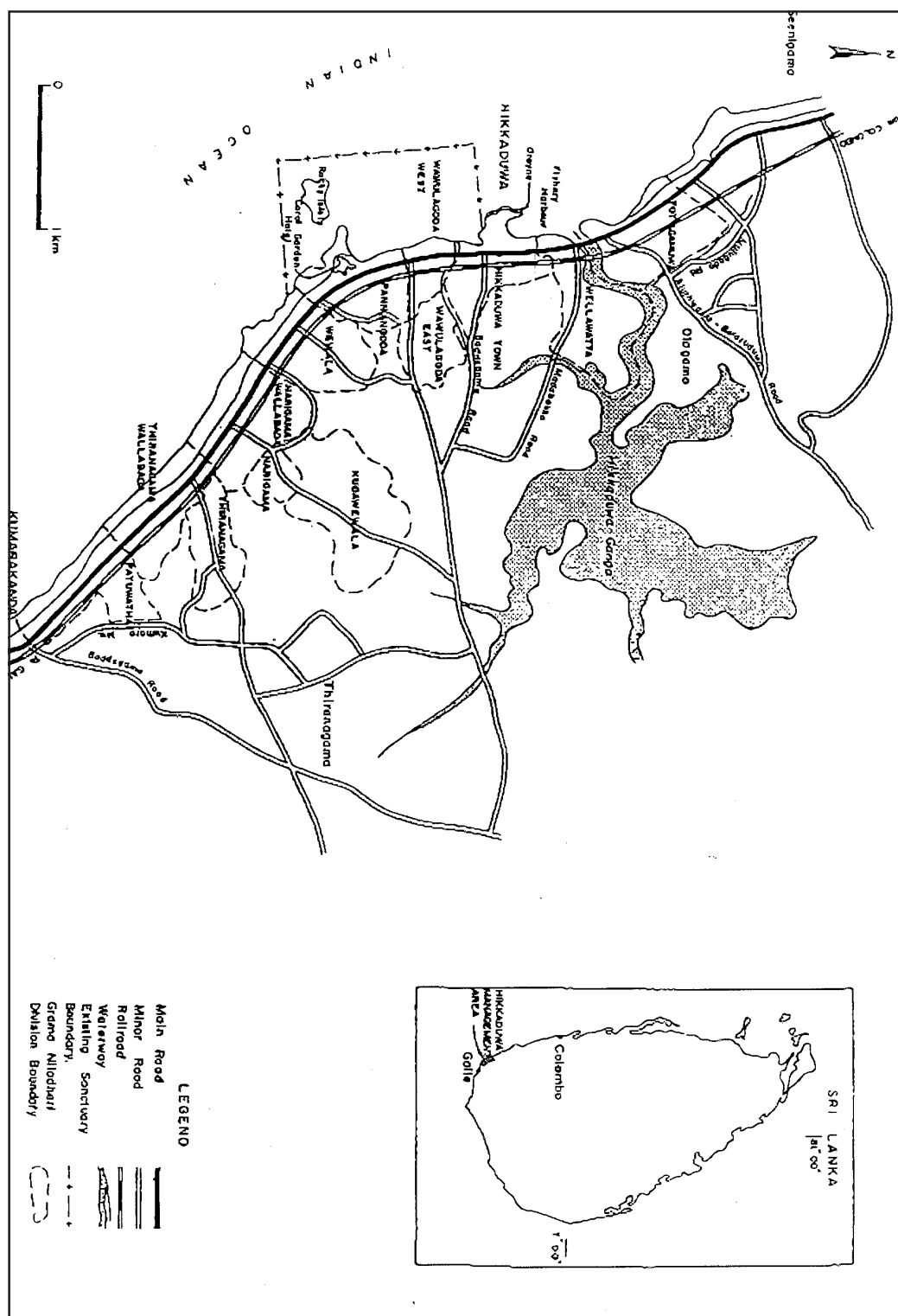
- Excessive traffic speed, noise and congestion
- Increasingly intensity of beach and sanctuary use
- Illegal construction on beaches and loss of public access

Impacts of Tourism and Need for Livelihood Opportunities

- Lack of alternative forms of income generation
- Local informal tourism facilities do not work together
- Aggressive touts intimidate visitors
- A reputation for prostitution

Source: SAM Plan for Hikkaduwa Marine Sanctuary and Environs, 12

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To address these issues the coordinating committee adopted four overall objectives for the overall SAM Plan:

1. Improve the health of the ecosystem within and near the sanctuary by reducing physical damage to the coral reef; improving coastal water quality; and, enhancing the populations of marine organisms.
2. Improving the capability of the local community to protect and manage the coastal resources in an integrated and sustainable manner by increasing public awareness; ensuring community participation in planning; and, by developing institutional and legal support for SAM planning actions;
3. Increase the benefits at the local and national level by encouraging a viable local economy based on sustainable levels of tourism and fishing; and
4. Enrich the general environmental quality of the community by making advances in waste disposal, water supply, transport infrastructure, and land use planning (SAM Plan for Hikkaduwa Marine Sanctuary and Environs, 11).

An Environmental Profile was developed and, based in part on the profile, a SAM plan was developed. The plan was developed primarily by CRMP and consultants based on recommendations by the steering committee and others. The SAM Plan for Hikkaduwa Marine Sanctuary and Environs outlines 15 objectives, 16 strategies and 116 specific actions intended to designed the objectives. The full list of objectives, strategies, and actions is shown in Appendix 1.

B. REKAWA

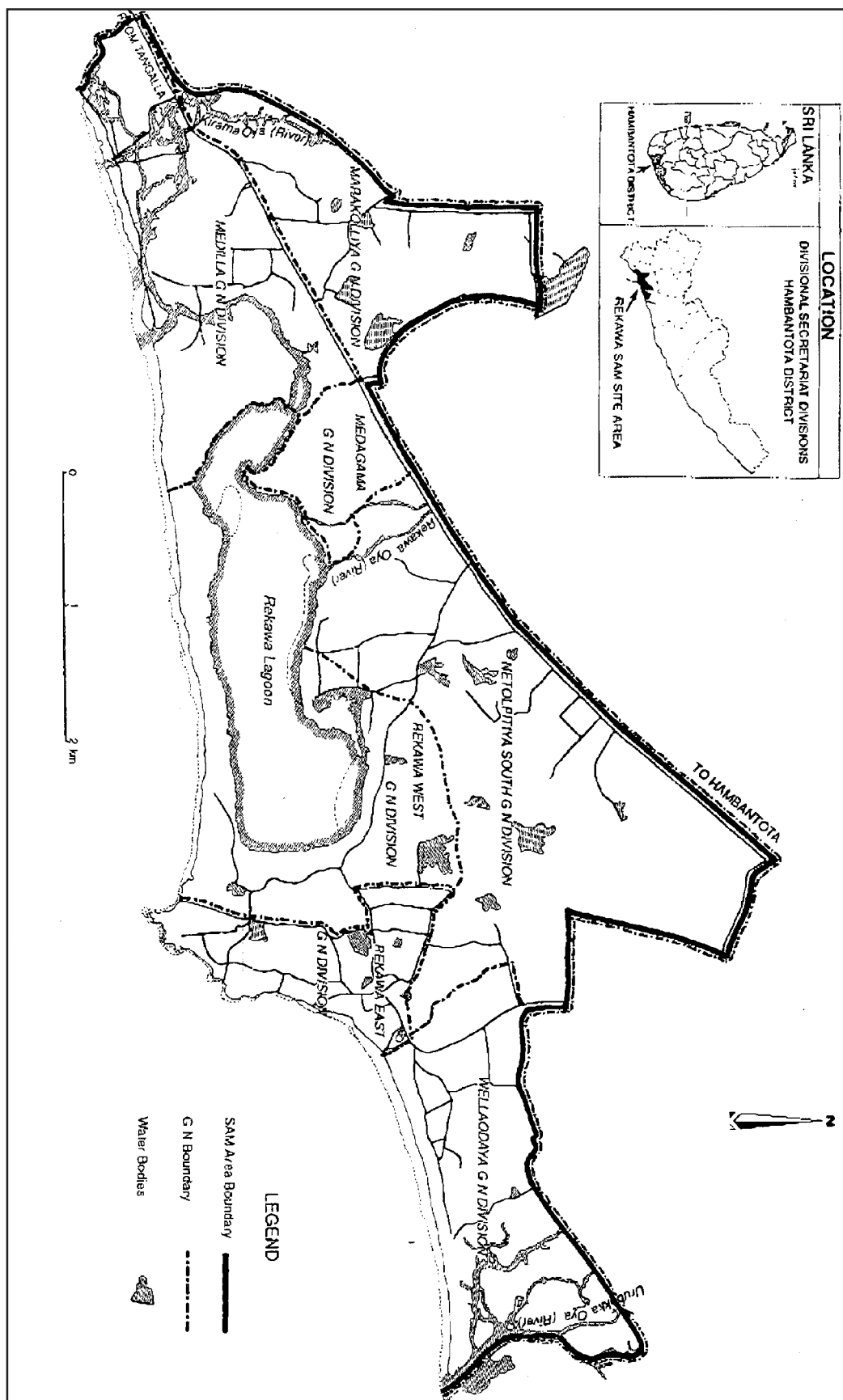
Rekawa, a rural coastal community, is located about 200 km. south of Colombo in the Tangalla District. The settlement is dominated by Rekawa Lagoon. The lagoon, which covers about 250 ha, is surrounded by mangrove and scrub forest (about 200 ha). The lagoon is bounded on the ocean side by a broad, sandy beach about 10 km. long. Landward of the lagoon is a large tract (about 500 ha) of abandoned paddy fields (SAM Plan for Rekawa Lagoon, 1).

The SAM planning area encompasses 20 villages in 7 Grama Niladhari Divisions. About 5400 people (1200 families) live around the lagoon. The project area is shown in Figure 2. Most of the population (45%) is less than 20 years old. About half the population lives off lagoon or sea fishing and the other half is engaged in some type of agricultural activities. Their incomes are low even relatives to Sri Lankan standards (SAM Plan for Rekawa Lagoon, 1).

Because the population relies on the coastal resources base for their livelihood, degradation and depletion of coastal resources threatens to drive incomes even lower. Agriculture has declined because of poorly-planned irrigation. Some families relied on coral mining even though coral mining and processing is illegal. Productivity of the lagoon has decreased although the potential for increased yield is well recognized (SAM plan for Rekawa Lagoon, 11).

The SAM Planning process in Rekawa is coordinated by the Rekawa Special Area Management Coordinating Committee. The committee includes representatives from the National Aquatic Resources Agency (NARA), the Irrigation Department, the Divisional Secretary (DS), the Tangella Pradeshiya Sabha (PS), the Hambantota Integrated Rural Development Program, the Department of Fisheries and Aquatic Resources Development and the Rekawa Lagoon and Sea Fishery Cooperative Societies (SAM Plan for Rekawa Lagoon, 3). Staff of the Coast Conservation Department and the Coastal Resource Management Project served as a catalysts to the planning process and continue to assist in implementation. The Committee began meeting in mid-1994 and continues to meet monthly.

Figure 2: The Rekawa SAM site and Grama Niladhari Divisions



The committee identified a number of issues to be addressed by the SAM plan:

Table 2: Management Issues of the Rekawa Special Area Management Plan

Lagoon Water System Degredation

- Reduced fresh water flow due to irrigation uses
- Reduced sea water exchange in the lagoon
- Sedimentation and pollution of lagoon

Lagoon and Marine Resources Depletion

- Over fishing of shrimp and fish in lagoon
- Degredation of coral reef from coral mining
- Poaching of turtle eggs and slaughter of animals
- Erosion of sea beach related to coral mining
- Cutting of mangroves and scrub forest

Shoreline and Land Use Problems

- Abandoned land in Yarawela Yaya and Patha Palama Welyaya due to high salinity
- Low production and diversity in agriculture
- Lack of guidelines and zoning for Aquaculture
- Lack of guidelines and zoning for tourism development

Incidence of Poverty and Lack of Livelihoods

- Over dependence on social welfare programs
- Weak Community organizations with poor leadership
- Lack of training and education for alternative jobs
- No development of sustainable aquaculture and tourism

Source: SAM Plan for Rekawa Lagoon,

To address these issues, the coordinating committee adopted several objectives:

1. Stengthen community organizations and build new ones to enable them to participate actively in the management of their natural resources and livelihoods;
2. Improve the productivity and diversity of the ecosystems by reducing the degradation of the beach, the lagoon, the mangroves and the fisheries;
3. Increases community awareness of natural resources values and understanding of resources ownership for management to sustain environmental and economic well-being;
4. Reduce conflicts among users of natural resources;
5. Conduct research and periodic monitoring activities to provide information and feedback to the Management Plan;

6. Develop alternative employment for those engaged in degrading the natural resources through development of agricultural and aquaculture, tourism and other appropriate means; and,
7. Promote policies to provide institutional and legal support for the Management Plan and its implementation.

A SAM plan for Rekawa was developed by CCD and CRMP staff and consultants in 1996 based on recommendations by the steering committee. Residents also contributed to the plan to a greater extent than Hikkaduwa. Indeed, plan recommendations were also widely distributed and discussed in the community. The SAM Plan for Rekawa Lagoon, contains 16 objectives, 16 strategies and 71 actions designed to implement the plan.

Appendix IV - Report of Workshop Regional Break-out Session

For the Break-out session, participants were requested to form regional groups to represent Africa, Asia, Latin America and the Caribbean and Europe. Groups were asked to address two tasks, and were provided with supporting questions to stimulate discussion as follows:

Task 1: Identify the resource issues most suitable for community/co-management and list the major obstacles that impede community/co-management in your country.

- How suitable is community management for coastal problems in your country?
- What sorts of resource problems are most appropriate for community/co-management?
- What's special about the Sri Lanka community management situation that may not be applicable or relevant in your country?
- What are the major obstacles impeding community level coastal management in your country?

Task 2: In the context of your own country, discuss and report out your response to the following questions:

- What can communities, government and non-government organizations do to overcome the obstacles listed in Task 1?
- What are appropriate roles for national agencies to support community/co-management?
- What can international programs/initiatives do to support community/co-management?

An outline summary in note form of the regional groups' outputs follows:

Africa

Task 1

Suitability of Community based management

West Africa - Problems

- community inclined
- community needs to be sensitized/educated

South Africa

- ownership/access to resources
- continuum of community participation - co-management
- public participation in the decision of the process

East Africa

- real partnership in resources management

- requirement of consensus for resource management

- requirement of consensus for resource management

South Africa

- land use
- access to fisheries resources

- mangrove cutting/coastal forests
- sand mining-tourism

- 1) Capacity
- 2) Poverty
- 3) Lack of alternative (livelihood)
- 4) Conflict between local community and outsiders
- 5) Shortage of funding
- 6) Lack of reinvestments
- 7) Traditional and religious beliefs
- 8) Lack of/or inadequate legal and institutional framework
- 9) Lack of awareness
- 10) Lack of scientific knowledge (inability to apply scientific-knowledge/traditional knowledge)



To Overcome Obstacles

- 1) Educating and training community
- 2) Community needs to be organized
- 3) Enabling policy framework
- 4) Community initiative to initiate new programs
- 5) Government should enable NGO's and private sector to build capacity
- 6) Exchange and dissemination of information
- 7) Governmental commitments (political will)
- 8) Develop conflict resolution skills
- 9) Participation from the start
- 10) Government must acknowledge community participation
- 11) Need for recognition of individual involvement
- 12) Regional and interim cooperation strategies
- 13) Develop long-term strategy, while addressing short-term ones
- 14) Integration at the national government level
- 15) Creating incentives for local support
- 16) Full international support to reinforce regional cooperation

Asia

Task 1

Resource Issues

1. Controlling coastal erosion through community afforestation schemes (e.g.. mangroves and soil stabilization, etc.)
2. Limiting use of destructive fishing practices such as use of dynamite, cyanide and fine mesh nets, etc. and limited access to fisheries (nearshore)
3. Utilizing traditional management of critical resources (dugong, turtle, etc.)
4. Management of coral reefs, seagrass beds, and mangroves.
5. Development of local ecotourism initiatives.
6. When governments default on their obligations
7. Habitat restoration.

Task 2

Major Obstacles and Responses (R)

1. Vertical structure of national governance.
(R)-Cross sectoral cooperation and coordination
2. Inter-governmental rivalries
(R)-create incentives for cooperation (start small and work up)
3. Lack of political willpower and stability
(R)-Building a grass-roots constituency. leadership, education.
4. Poor enforcement capacity and inadequate legal basis
(R)-Building enforcement capacity; creation of viable legal framework.
Create community-based enforcement and monitoring capacity; based on community involvement
5. Religious and ethnic inequalities
(R)-Better/education and information
6. Inequitable distribution of resources: human and financial; seed money for progress
(R)-More appropriate allocation of resources
7. Lack of local expertise
(R)-training and education; seed money from international agencies.
8. Lack of cooperative mechanisms within communities (lack of a facilitator)
(R)-get an independent facilitator from local community
9. Lack of NGO competence
(R)-Providing opportunities for NGO involvement, providing education on cultural issues, etc. NGO mentoring
10. No basis for a common understanding of issues
(R)-IEC campaigns - development of common information base; involvement of community in data gathering. More relevant scientific research and validation. This information should be standardized and include traditional and ecological knowledge. Use of internet resources; technology transfer (e.g. GIS).

Latin America and the Caribbean

Task 1

Resource Issues

- Fisheries
- Marine Parks
- Estuaries
- Tourism
- Coral Reefs
- Beach Management
- Energy
- Resource Access
- Land-based issues
- Water supply
- Sustainability
- Trust and acceptance among stakeholders - legitimacy
- Education of the stakeholders
- Geographical size of the country (regional problems)
 - -level of decentralization of decision making
- Political will
- Go beyond political boundaries with respect to natural resources

Suitability of community management and obstacles

- Varies with complexity of the users
- Stakeholders must be truly represented (i.e.- delegates must really represent)
- Negative impact to be mitigated must be solved among stakeholders
- Cultural and traditional complexity and differences
- Immediate benefits to the stakeholders

What are the obstacles to natural resources being managed by co-management

- Delegates do not really represent anyone
- Negative impacts are not caused (all) by stakeholders
- Cultural and traditional complexity, differences
- Varies with the complexity of the users
- Sustainability (financial, ecological, social, institutional)
- Political will
- Trust and acceptability among stakeholders
- Education of stakeholders
- Geographical size (regional problems)
- Level of decentralization
- Going beyond political boundaries

Resources best managed by co-management

- Fisheries
- Marine protected areas
- Tourism
- Resource access
- Estuaries
- Coral reefs
- Water resources utilization

Why are those issues suitable to be managed by co-management?

- Negative impacts must be solvable among stakeholders
- Immediate benefits to stakeholders

Task 2

What to do? Government

- Move funds directly to local government and communities
- Move education and training to local communities
- More authority to local community
- Institutional framework for meaningful community participation
- Establish clear national policy

What to do? NGO's

- Promote public environmental education
- Provide conflict resolution support; and links between government and community and international community
- Provide organizational, technical, resource and financial support to communities
- Promote and preserve traditional, sustainable uses and methods where appropriate

Appropriate roles for national agencies

- Coordination among agencies and consistency
- Accountability
- Dissemination of information and data as well as best practices/lessons learned and technologies
- Training and capacity building
- Funding

What to do? Community

- Get organized (e.g.-training)
- Start small links-lead to -larger ties
- Influence the political and management process
- Work on "watershed/ecosystem" level

Roles for international programs:

- Coordination
- Dissemination of best practices, data and lessons learned and technology (sharing experiences)
- Place conditions on national governments to observe certain practices (encourage best practices)
- Funding
- Capacity building
- Encourage use of local expertise

Europe

Task 1

Resource Issues

- Ports and port development
- Land-use (land and lack of water-use planning)
- Beaches
- Water Use
- Natural resources -living and non-living
- Aquaculture
- Tourism
- Recreation
- Agricultural land
- Habitat
- Coastal erosion/defense
- Cultural heritage



Major Obstacles

- Government structure
 - over centralized governments
- Financial problems
 - lack of funding and incentives/mechanisms
 - externalization of costs
- Lack of planning
 - at national/regional/local level
- Lack of information and distribution
- Structure is too sectoral
 - lack of integration
- Lack of economic alternatives
- Lack of enforcement of regulations
- Privatization (water, ports)
- Lack of education and training in community/co-management

Task 2

What can governments, NGO's and Communities do?

- Balance national/local roles
- Talk to each other (forums, cooperative councils)
- Listen to each other
- Find common goals
- Find common values
- Find common solutions
- PARTNERSHIP

Government

- Legislation-appropriate and effective
- Financial support/incentives
- Guidance
- Public education
- Active participation in process

NGOs

- Make governments accountable for actions
- Raise awareness about coastal issues
- Education and training
- Active participation in process

Community

- Knowledge-local
- Financial support
- Active participation in process

What are appropriate roles for national agency support?

- Develop national goals
- Guidance
- Financial support
- Ensuring conformity with international picture
- Remove inappropriate incentives/subsidies
- Exchange of information/technical expertise
- Effective sharing of authority
- Intra-government coordination

What can international programs/initiatives do?

- Facilitate coordination between national programs
- Share experiences/knowledge
- Provide training and exchange
- Facilitate resourcing
- Generate enthusiasm
- Harmonize norms, and standards

